IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please amend claims 17 and 21 in accordance with the following:

1-10 (cancelled)

11. (previously amended) A method for communication among equal-access stations of a ring-shaped, serial fiber-optic bus, comprising:

during one bus cycle, a predetermined one of the stations generating strictly time-cyclical container messages, addressing the container messages, and supplying the container messages to the bus, the predetermined one of the stations supplying a synchronization message to the bus as an end message of the bus cycle;

each one of the stations writing respective data in the container messages addressed to the one of the stations;

each one of the stations reading data of written-in container messages on the serial bus as a function of a read authorization of the one of the stations;

each one of the stations communicating only with the bus, due to source addressing of the written respective data and each one of the stations having direct-access read authorization of the respective data written by each one of the stations;

each one of the stations reading the synchronization message and generating a respective interrupt as a function of the synchronization message, wherein depending on a respective position of each one of the stations, the respective interrupt being time delayed so that all of the respective interrupts are output in a time-synchronous manner; and

further processing the read data when the respective interrupts are output.

12. (previously presented) The method according to claim 11, wherein the time delay is determined according to the following equation: $t_{vz.n} = [N - (n - 1)] \cdot 3B$

where N = number of users B = bit time

n = location number of the station.

13. (previously presented) The method according to claim 11, further comprising:

continually providing to the serial bus addressed blank messages following a last addressed container message.

14. (previously presented) The method according to claim 13, further comprising:

outputting special messages for filling up the bus cycle between the last generated addressed message and the synchronization message.

15. (previously presented) The method according to claim 14, wherein the addressing and supplying of the container messages is carried out in accordance with an increasing address part.

16. (previously presented) The method according to claim 15, wherein the addressing and supplying of the contain messages is carried out in accordance with an increasing subaddress part.

17. (currently amended) A device for providing communication among equal-access stations of a ring-shaped, serial fiber-optic bus, comprising:

a respective interface module at each of the stations; and

two respective bus connector sockets at each of the stations, each respective interface module being connected to the serial bus via the two respective bus connector sockets;

wherein one of the stations is parameterized as a dispatcher station, and others of the stations being parameterized as transceiver stations, the dispatcher station including a list of all messages to be transmitted, and each of the transceiver stations having a read authorization

wherein each respective interface module includes a programmable microchip having an associated erasable read-only memory, a read-write memory, and a clock generator, each respective interface module including a system connector, an opto-electrical and electro-optical converter, and a voltage source, each of the respective bus connector sockets being linked to the programmable microchip by the converter, the programmable microchip being connected to the system connector via signal lines;

wherein the programmable microchip is provided as a programmable gate array, and

wherein the read-write memory has stored thereon a communications controller comprising a task table that includes a number of messages to be sent in a bus cycle by the dispatcher station, an address and channel number as a subaddress of each station, and addresses of blank messages and special messages to be used to fill up the bus cycle between

the last generated addressed message and the synchronization message.

18. (cancelled)

19. (previously presented) The device according to claim 17, wherein the interface module includes light-emitting diodes for status display.

20. (cancelled)

21. (currently amended) A device for providing communication among equal-access stations of a ring-shaped, serial fiber-optic bus, comprising:

a respective interface module at each of the stations; and

two respective bus connector sockets at each of the stations, each respective interface module being connected to the serial bus via the two respective bus connector sockets;

wherein one of the stations is parameterized as a dispatcher station, and others of the stations being parameterized as transceiver stations, the dispatcher station including a list of all messages to be transmitted, and each of the transceiver stations having a direct-access read authorization which allows reading of data written in the transmitted messages by each of the transceiver stations, and

wherein the each interface module includes a read-write memory that has stored thereon a communications controller comprising a task table that includes a number of messages to be sent in a bus cycle by the dispatcher station, an address and channel number as a subaddress of each station, and addresses of blank messages and special messages to be used to fill up the bus cycle between the last generated addressed message and the synchronization message.